

REMARKS

1. In response to the Office Action mailed August 7, 2006, Applicants respectfully request reconsideration. Claims 1-54 were originally presented in the application. In the outstanding Office Action, all claims have been rejected. By the foregoing Amendments, claims 1, 10, 15, 16, 21-23, 28, 37, 42, 43, and 48-50 have been amended. Claims 20 and 47 are canceled. No claims have been added. Thus, upon entry of this paper, claims 1-19, 21-46, and 48-54 will be pending in this application. Of these fifty-two (52) claims, six (6) claims (claims 1, 15, 16, 28, 42, and 43) are independent. Based on the above Amendments and following Remarks, Applicants respectfully request that all outstanding objections and rejections be reconsidered, and that they be withdrawn.

Objections to the Drawings

2. In the Office Action, the Examiner objected to the drawings and stated that this objection can be overcome by either amending the specification only or by amending both the drawings and the specification. Applicants have accordingly amended the specification only. Applicants, therefore, respectfully request that the Examiner reconsider and withdraw the objection to the drawings.

Amendments to the Specification

3. The amendments to the specification are to address the Examiner's objection to the Drawings and Specification. Based on the above Amendments, Applicants respectfully request that the objection to the Drawings and Specification be withdrawn.

Art of Record

4. Applicants acknowledge receipt of form PTO-892 identifying additional references made of record by the Examiner.

5. Applicants thank the Examiner for returning the form PTO-1449 and PTO Form SB/08/a filed by Applicants on December 28, 2004 and January 30, 2006, which have been initialed by the Examiner indicating consideration of the references cited therein.

Claim Objections

6. Claims 10, 23, 37 and 50 have been objected to because of an informality. Applicants have amended claims 10, 23, 37, and 50 to overcome these objections. Applicants respectfully request that this objection be withdrawn.

Double Patenting Rejections

7. The Examiner has provisionally rejected claims 1-54 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 and 1-40 of copending Applications No. 10/646,099 to Barr, *et al.* (hereinafter "Barr '099") and 10/646,078 to Barr, *et al.* (hereinafter, "Barr '078").

8. Applicants respectfully note that this is a provisional rejection and that the claims of the present application and the noted co-pending applications have been or may be amended. Applicants accordingly respectfully request that the Examiner reconsider the rejection in light of the amendments.

Claim Rejections under §101

9. Independent claims 1, 15, 28, and 42 and dependent claims 2-14, 28-41 have been rejected under 35 U.S.C. § 101 because the language of the claims raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible results to form the basis of statutory subject matter.

10. Applicants have amended independent claims 1, 15, 28 and 42 to recite "generating a clock signal for the first electronic device in accordance with the selected first clock frequency; and generating a clock signal for the second electronic device in accordance with the selected second clock frequency." Applicants respectfully submit amended claims 1, 15, and 42 satisfy the requirements of 35 U.S.C. §101, and accordingly requests that the Examiner reconsider and withdraw the rejections of claims 1, 15, 28, and 42.

11. Applicants accordingly respectfully submit that dependent claims 2-14 and 29-41, which depend either directly or indirectly from independent claim 1 and 28, respectively, likewise

satisfy the requirements of 35 U.S.C. §101 at least due to their dependence on independent claim 1.

Claim Rejections under §102 and §103

12. Independent claims 1, 15, 16, 28, 42 and 43 and dependent claims 2-4, 7-11, 13-14, 17, 21-24, 26-27, 29-31, 34-38, 40-41, 44, 47-51 and 53-54 have been rejected under 35 U.S.C. § 102(b) as being clearly anticipated by U.S. Patent No. 6,484,222 to Olson *et al.* (hereinafter, "Olson"). Dependent claims 5, 12, 18, 25, 32, 39, 45 and 52 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson and further in view of U.S. Patent No. 6,714,890 to Reinhardt *et al.* (hereinafter, "Reinhardt"). Dependent claims 6, 19, 33 and 46 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson and further in view of U.S. Patent No. 6,513,124 to Furuichi, *et al.* (hereinafter, "Furuichi").

13. Applicants note that on page 34 line 2 of the Office Action, the Examiner identifies U.S. Patent No. 6,714,890 to Dai (hereinafter, "Dai"). However, all subsequent rejections in this portion of the Office Action identify Reinhardt and Dai does not appear to be referenced elsewhere in this section. Applicants, therefore, believe that the Examiner incorrectly identified Dai in line 2 of page 34 and instead meant to identify Reinhardt. Applicants therefore below address the rejections in light of Reinhardt.

14. As amended, claim 1 recites, in part,

obtaining information related to power consumption and/or
heat dissipation characteristics of the electronic device and zero or
more other electronic devices installed in the system;
automatically selecting a clock frequency for the electronic
device based at least on the obtained information about the
electronic device and the zero or more other electronic devices
installed in the system and information regarding a power
consumption and/or a heat dissipation budget for the system
....(See, Claim Amendments Above)

15. As noted above, the Examiner has rejected independent claim 1 as anticipated by Olson. Applicants respectfully submit that for at least the below discussed reasons the Examiner's reliance on Olson is misplaced and respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 as anticipated by Olson.

16. Olson discloses a system that operates at multiple clock speeds. (*See*, Olson at Abstract.) The system of Olson identifies the number of peripheral devices that have been installed in the expansion slots and whether these devices support high speed operations. *Id.* Olson discloses that it determines this information from signals transmitted by the expansion slots, which indicate the presence of a peripheral device in the slot and whether the device is operable at the higher clock frequency. *Id.* Using this information, the system determines whether system operations at the higher frequency can be supported by the peripheral devices. *Id.* If the higher frequency operations can be supported, the system of Olson transmits a signal over a bus bridge to which the peripheral devices are connected that indicates that high frequency operations will be supported. *Id.*

17. As such, the system of Olson determines whether high frequency operations may be supported simply by receiving a signal indicating the presence of the peripheral device and a signal indicating whether high frequency operations are supported by the peripheral device. Olson, however, does not disclose obtaining information related to the power consumption and/or heat dissipation characteristics of the electronic device. Nor does, Olson teach or suggest using such information in selecting a clock frequency. Rather, Olson simply discloses selecting a higher clock frequency for the devices based on signals received from an expansion slot indicating whether a peripheral device installed in the slot can support high frequency operations.

18. As such, Olson fails to teach or suggest “obtaining information related to power consumption and/or heat dissipation characteristics of the electronic device ...; and automatically selecting a clock frequency for the electronic device based at least on the obtained information ...and information regarding a power consumption and/or a heat dissipation budget for the system,” as recited in amended independent claim 1. Applicants accordingly respectfully request that the Examiner reconsider and withdraw the rejection to claim 1 for at least this reason.

19. Applicants further respectfully submit that neither Reinhardt nor Furuichi, which the Examiner relied on in rejecting one or more of the dependent claims, cure the above-noted defect of Olson.

20. Reinhardt is directed to reducing power consumption of an electronic device if certain conditions occur. (*See*, Reinhardt at col. 2 lns. 30-38.) One such condition is to reduce power consumption by the electronic device if it is determined to have exceeded a thermal band. (*See*, Reinhardt at col. 2 lns. 38-40.) If the condition is met, the electronic device undergoes both voltage and frequency scaling. (*See*, Reinhardt at col. 6 lns. 21-24.) Thus, the system of Reinhardt looks at the thermal budget for the entire system (referred to in Reinhardt as the electronic device) and does not obtain information related to the heat dissipation characteristics of an electronic device installed in the system. That is, the system of Reinhardt simply looks at whether the thermal threshold for the system (the electronic device of Reinhardt) has been exceeded. It does not however, obtain information related to the heat dissipation characteristics of an electronic device installed in the system. Thus, Rheinhardt fails to cure the above-noted defect of Olson.

21. Likewise, Furuichi does not cure the above-noted defect of Olson. Furuichi discloses a method wherein the operating speed of a CPU is changed based on a power consumption index for the system. (*See*, Furuichi at col. 8 lns 9-11.) Particularly, Furuichi discloses calculating a power index, $P(f_1)$, for the system and determining whether or not this calculate power index, $P(f_1)$, is within a specified range. (*See*, Furuichi at col. 8 lns 11-17.) If not, the operating speed, f_1 , of the CPU is accordingly changed and the power index, $P(f_1)$, recalculated. (*See*, Furuichi at col. 8 lns 17-39.) This method, however, does not involve obtaining information relating to the power consumption characteristics of an electronic device installed in the system. Rather, it looks simply at the power consumption of the system itself.

22. As such, Applicants respectfully submit that neither Olson, Reinhardt, nor Furuichi, whether taken alone or in combination, teach or suggest "obtaining information related to power consumption and/or heat dissipation characteristics of the electronic device and zero or more other electronic devices installed in the system," as recited by claim 1. Applicants accordingly respectfully submit that claim 1 is in condition for allowance.

23. Independent claims 15, 16, 28, 42 and 43 have been similarly amended. Applicants therefore respectfully submit that independent claims 15, 16, 28, 42 and 43 are allowable for at least similar reasons to those discussed above with reference to independent claim 1.

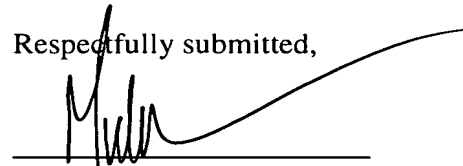
Dependent Claims

24. The dependent claims incorporate all of the subject matter of their respective independent claims and add additional subject matter which makes them *a fortiori* independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn.

Conclusion

25. In view of the foregoing, this application should be in condition for allowance. A notice to this effect is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M. Verga', is written over a horizontal line.

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